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SEQUENCE LISTING

<110> Evotec NeuroSciences GmbH

<120> Diagnostic and therapeutic use of Vault polynucleotides
and proteins for neurodegenerative diseases.

<130> P67785US1

<140> PCT/EP03/03626

<141> 2002-04-08

<150> 02007820.0

<151> 2002-04-08

<150> US 60/370,214

<151> 2002-04-08

<160> 14

<170> PatentIn Ver. 2.1

<210> 1

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ADPRTL1 cDNA
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<210> 2

<211> 1724

<212> PRT

<213> Homo sapiens

<400> 2

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Tyr Leu Pro Gln Gln Lys Lys Lys Leu Gln Thr Asp Ile Lys Glu
20 25 30

Asn Gly Gly Lys Phe Ser Phe Ser Leu Asn Pro Gln Cys Thr His Ile
35 40 45

Ile Leu Asp Asn Ala Asp Val Leu Ser Gln Tyr Gln Leu Asn Ser Ile
50 55 60

Gln Lys Asn His Val His Ile Ala Asn Pro Asp Phe Ile Trp Lys Ser
65 70 75 80

Ile Arg Glu Lys Arg Leu Leu Asp Val Lys Asn Tyr Asp Pro Tyr Lys
85 90 95

Pro Leu Asp Ile Thr Pro Pro Asp Gln Lys Ala Ser Ser Ser Glu

100	105	110
Val Lys Thr Glu Gly Leu Cys Pro Asp Ser Ala Thr Glu	Glu Glu Asp	
115	120	125
Thr Val Glu Leu Thr Glu Phe Gly Met Gln Asn Val Glu	Ile Pro His	
130	135	140
Leu Pro Gln Asp Phe Glu Val Ala Lys Tyr Asn Thr Leu Glu	Lys Val	
145	150	155
Gly Met Glu Gly Gly Gln Glu Ala Val Val Glu Leu Gln Cys	Ser	
165	170	175
Arg Asp Ser Arg Asp Cys Pro Phe Leu Ile Ser Ser His Phe	Leu Leu	
180	185	190
Asp Asp Gly Met Glu Thr Arg Arg Gln Phe Ala Ile Lys Lys	Thr Ser	
195	200	205
Glu Asp Ala Ser Glu Tyr Phe Glu Asn Tyr Ile Glu Glu Leu	Lys Lys	
210	215	220
Gln Gly Phe Leu Leu Arg Glu His Phe Thr Pro Glu Ala Thr	Gln Leu	
225	230	235
Ala Ser Glu Gln Leu Gln Ala Leu Leu Leu Glu Glu Val Met	Asn Ser	
245	250	255
Ser Thr Leu Ser Gln Glu Val Ser Asp Leu Val Glu Met Ile	Trp Ala	
260	265	270
Glu Ala Leu Gly His Leu Glu His Met Leu Leu Lys Pro Val	Asn Arg	
275	280	285
Ile Ser Leu Asn Asp Val Ser Lys Ala Glu Gly Ile Leu Leu	Leu Val	
290	295	300
Lys Ala Ala Leu Lys Asn Gly Glu Thr Ala Glu Gln Leu Gln	Lys Met	
305	310	315
Met Thr Glu Phe Tyr Arg Leu Ile Pro His Lys Gly Thr Met	Pro Lys	
325	330	335
Glu Val Asn Leu Gly Leu Leu Ala Lys Lys Ala Asp Leu Cys	Gln Leu	
340	345	350
Ile Arg Asp Met Val Asn Val Cys Glu Thr Asn Leu Ser Lys	Pro Asn	
355	360	365
Pro Pro Ser Leu Ala Lys Tyr Arg Ala Leu Arg Cys Lys Ile	Glu His	
370	375	380
Val Glu Gln Asn Thr Glu Glu Phe Leu Arg Val Arg Lys Glu	Val Leu	
385	390	395
Gln Asn His His Ser Lys Ser Pro Val Asp Val Leu Gln Ile	Phe Arg	
405	410	415
Val Gly Arg Val Asn Glu Thr Thr Glu Phe Leu Ser Lys Leu	Gly Asn	

420	425	430
Val Arg Pro Leu Leu His Gly Ser Pro Val Gln Asn Ile Val Gly Ile		
435	440	445
Leu Cys Arg Gly Leu Leu Leu Pro Lys Val Val Glu Asp Arg Gly Val		
450	455	460
Gln Arg Thr Asp Val Gly Asn Leu Gly Ser Gly Ile Tyr Phe Ser Asp		
465	470	475
Ser Leu Ser Thr Ser Ile Lys Tyr Ser His Pro Gly Glu Thr Asp Gly		
485	490	495
Thr Arg Leu Leu Leu Ile Cys Asp Val Ala Leu Gly Lys Cys Met Asp		
500	505	510
Leu His Glu Lys Asp Phe Ser Leu Thr Glu Ala Pro Pro Gly Tyr Asp		
515	520	525
Ser Val His Gly Val Ser Gln Thr Ala Ser Val Thr Thr Asp Phe Glu		
530	535	540
Asp Asp Glu Phe Val Val Tyr Lys Thr Asn Gln Val Lys Met Lys Tyr		
545	550	555
Ile Ile Lys Phe Ser Met Pro Gly Asp Gln Ile Lys Asp Phe His Pro		
565	570	575
Ser Asp His Thr Glu Leu Glu Glu Tyr Arg Pro Glu Phe Ser Asn Phe		
580	585	590
Ser Lys Val Glu Asp Tyr Gln Leu Pro Asp Ala Lys Thr Ser Ser Ser		
595	600	605
Thr Lys Ala Gly Leu Gln Asp Ala Ser Gly Asn Leu Val Pro Leu Glu		
610	615	620
Asp Val His Ile Lys Gly Arg Ile Ile Asp Thr Val Ala Gln Val Ile		
625	630	635
Val Phe Gln Thr Tyr Thr Asn Lys Ser His Val Pro Ile Glu Ala Lys		
645	650	655
Tyr Ile Phe Pro Leu Asp Asp Lys Ala Ala Val Cys Gly Phe Glu Ala		
660	665	670
Phe Ile Asn Gly Lys His Ile Val Gly Glu Ile Lys Glu Lys Glu Glu		
675	680	685
Ala Gln Gln Glu Tyr Leu Glu Ala Val Thr Gln Gly His Gly Ala Tyr		
690	695	700
Leu Met Ser Gln Asp Ala Pro Asp Val Phe Thr Val Ser Val Gly Asn		
705	710	720
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725	730	735
Leu Ser Ile Leu Gly Thr Val Gly Val Phe Phe Met Pro Ala Thr Val		

740

745

750

Ala Pro Trp Gln Gln Asp Lys Ala Leu Asn Glu Asn Leu Gln Asp Thr
 755 760 765

Val Glu Lys Ile Cys Ile Lys Glu Ile Gly Thr Lys Gln Ser Phe Ser
 770 775 780

Leu Thr Met Ser Ile Glu Met Pro Tyr Val Ile Glu Phe Ile Phe Ser
 785 790 795 800

Asp Thr His Glu Leu Lys Gln Lys Arg Thr Asp Cys Lys Ala Val Ile
 805 810 815

Ser Thr Met Glu Gly Ser Ser Leu Asp Ser Ser Gly Phe Ser Leu His
 820 825 830

Ile Gly Leu Ser Ala Ala Tyr Leu Pro Arg Met Trp Val Glu Lys His
 835 840 845

Pro Glu Lys Glu Ser Glu Ala Cys Met Leu Val Phe Gln Pro Asp Leu
 850 855 860

Asp Val Asp Leu Pro Asp Leu Ala Ser Glu Ser Glu Val Ile Ile Cys
 865 870 875 880

Leu Asp Cys Ser Ser Met Glu Gly Val Thr Phe Leu Gln Ala Lys
 885 890 895

Gln Ile Ala Leu His Ala Leu Ser Leu Val Gly Glu Lys Gln Lys Val
 900 905 910

Asn Ile Ile Gln Phe Gly Thr Gly Tyr Lys Glu Leu Phe Ser Tyr Pro
 915 920 925

Lys His Ile Thr Ser Asn Thr Ala Ala Ala Glu Phe Ile Met Ser Ala
 930 935 940

Thr Pro Thr Met Gly Asn Thr Asp Phe Trp Lys Thr Leu Arg Tyr Leu
 945 950 955 960

Ser Leu Leu Tyr Pro Ala Arg Gly Ser Arg Asn Ile Leu Leu Val Ser
 965 970 975

Asp Gly His Leu Gln Asp Glu Ser Leu Thr Leu Gln Leu Val Lys Arg
 980 985 990

Ser Arg Pro His Thr Arg Leu Phe Ala Cys Gly Ile Gly Ser Thr Ala
 995 1000 1005

Asn Arg His Val Leu Arg Ile Leu Ser Gln Cys Gly Ala Gly Val Phe
 1010 1015 1020

Glu Tyr Phe Asn Ala Lys Ser Lys His Ser Trp Arg Lys Gln Ile Glu
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Asp Gln Met Thr Arg Leu Cys Ser Pro Ser Cys His Ser Val Ser Val
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Lys Trp Gln Gln Leu Asn Pro Asp Ala Pro Glu Ala Leu Gln Ala Pro

1060 1065 1070

Ala Gln Val Pro Ser Leu Phe Arg Asn Asp Arg Leu Leu Val Tyr Gly
1075 1080 1085

Phe Ile Pro His Cys Thr Gln Ala Thr Leu Cys Ala Leu Ile Gln Glu
1090 1095 1100

Lys Glu Phe Cys Thr Met Val Ser Thr Thr Glu Leu Gln Lys Thr Thr
1105 1110 1115 1120

Gly Thr Met Ile His Lys Leu Ala Ala Arg Ala Leu Ile Arg Asp Tyr
1125 1130 1135

Glu Asp Gly Ile Leu His Glu Asn Glu Thr Ser His Glu Met Lys Lys
1140 1145 1150

Gln Thr Leu Lys Ser Leu Ile Ile Lys Leu Ser Lys Glu Asn Ser Leu
1155 1160 1165

Ile Thr Gln Phe Thr Ser Phe Val Ala Val Glu Lys Arg Asp Glu Asn
1170 1175 1180

Glu Ser Pro Phe Pro Asp Ile Pro Lys Val Ser Glu Leu Ile Ala Lys
1185 1190 1195 1200

Glu Asp Val Asp Phe Leu Pro Tyr Met Ser Trp Gln Gly Glu Pro Gln
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Glu Ala Val Arg Asn Gln Ser Leu Leu Ala Ser Ser Glu Trp Pro Glu
1220 1225 1230

Leu Arg Leu Ser Lys Arg Lys His Arg Lys Ile Pro Phe Ser Lys Arg
1235 1240 1245

Lys Met Glu Leu Ser Gln Pro Glu Val Ser Glu Asp Phe Glu Glu Asp
1250 1255 1260

Gly Leu Gly Val Leu Pro Ala Phe Thr Ser Asn Leu Glu Arg Gly Gly
1265 1270 1275 1280

Val Glu Lys Leu Leu Asp Leu Ser Trp Thr Glu Ser Cys Lys Pro Thr
1285 1290 1295

Ala Thr Glu Pro Leu Phe Lys Lys Val Ser Pro Trp Glu Thr Ser Thr
1300 1305 1310

Ser Ser Phe Phe Pro Ile Leu Ala Pro Ala Val Gly Ser Tyr Leu Thr
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Pro Thr Thr Arg Ala His Ser Pro Ala Ser Leu Ser Phe Ala Ser Tyr
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Arg Gln Val Ala Ser Phe Gly Ser Ala Ala Pro Pro Arg Gln Phe Asp
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Ala Ser Gln Phe Ser Gln Gly Pro Val Pro Gly Thr Cys Ala Asp Trp
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Ser Ala Gly Thr Phe Pro Glu Leu Asp Ser Pro Gln Leu His Phe Ser		
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Leu Pro Thr Asp Pro Asp Pro Ile Arg Gly Phe Gly Ser Tyr His Pro		
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Ser Ala Tyr Ser Pro Phe His Phe Gln Pro Ser Ala Ala Ser Leu Thr		
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Ala Asn Leu Arg Leu Pro Met Ala Ser Ala Leu Pro Glu Ala Leu Cys		
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Ser Gln Ser Arg Thr Thr Pro Val Asp Leu Cys Leu Leu Glu Glu Ser		
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Val Gly Ser Leu Glu Gly Ser Arg Cys Pro Val Phe Ala Phe Gln Ser		
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1520		
Ser Asp Thr Glu Ser Asp Glu Leu Ser Glu Val Leu Gln Asp Ser Cys		
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Phe Leu Gln Ile Lys Cys Asp Thr Lys Asp Asp Ser Ile Pro Cys Phe		
1540	1545	1550
Leu Glu Val Lys Glu Glu Asp Glu Ile Val Cys Thr Gln His Trp Gln		
1555	1560	1565
Asp Ala Val Pro Trp Thr Glu Leu Leu Ser Leu Gln Thr Glu Asp Gly		
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Phe Trp Lys Leu Thr Pro Glu Leu Gly Leu Ile Leu Asn Leu Asn Thr		
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Val Lys Gly Arg Glu Cys Leu Leu Asp Leu Ile Ala Thr Met Leu Val		
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Leu Gln Phe Ile Arg Thr Arg Leu Glu Lys Glu Gly Ile Val Phe Lys		
1635	1640	1645
Ser Leu Met Lys Met Asp Asp Pro Ser Ile Ser Arg Asn Ile Pro Trp		
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Ala Phe Glu Ala Ile Lys Gln Ala Ser Glu Trp Val Arg Arg Thr Glu		
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1680		
Gly Gln Tyr Pro Ser Ile Cys Pro Arg Leu Glu Leu Gly Asn Asp Trp		
1685	1690	1695
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1700 1705 1710

Ser Pro Leu His Arg Val Leu His Tyr Ser Gln Gly
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer for the
human ADPRTL1 gene

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21

<210> 4
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer for the
human ADPRTL1 gene

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<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer for
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<210> 6
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer for
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<210> 7
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<212> DNA
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<220>
<223> Description of Artificial Sequence: primer for the
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<210> 8
<211> 22
<212> DNA
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<223> Description of Artificial Sequence: primer for the
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<210> 9
<211> 19
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer for
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<210> 10
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer for the
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<400> 10
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<210> 11
<211> 20
<212> DNA
<213> Artificial Sequence

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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer for the
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<210> 13
<211> 21
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<220>
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<210> 14
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
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